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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,241

01/19/2006

Walter Kuhn

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11/12/2008

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EXAMINER

GRESO, AARON J

ART UNIT

PAPER NUMBER

4131

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,241	Applicant(s) KUHN ET AL.	
	Examiner AARON GRESO	Art Unit 4131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060119</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his [or her] invention.

Claims 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 simply reads: "Enhancing a composition by adding thereto ester." Claim 7 is obviously vague.

For Claim 8, "the cis-3,3,5-trimethylcyclohexyl ester" lacks antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by *Asada et al.* (JP 2002-161112). *Asada et al.*'s application (from translation: *Detailed Description Paragraphs 14-15 and Figures 2 and 3*) discloses the use of a composition using more than 50 percent of a cis-3,3,5-Trimethylcyclohexylester. In this composition, at least one cis-3,3,5-Trimethylcyclohexylester is present and preferred with at least 75/25 percent over a 50/50 percent cis/trans composition component relationship. The preference is due to greater property stability (*Detailed Description Paragraphs 15*).

The properties of 3,3,5-Trimethylcyclohexyl-esters are inherent, including their olfactory properties.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-6, 10 and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rohde et al.* (WO 01/43784).

Rohde et al. (Page 4 Lines 10-31 and Page 5 Lines 1-25) teach a genus of compounds that include chemicals of the instant Claims 1-3, 5-8, 7-10 and 19-23. When the genus includes R⁴ and R⁹ (when R⁹ is substituted for R³, thus allowing R¹⁰ to be attached to R⁹ as a methyl group) where together R⁴ and R⁹ represent a methylene bridge that closes a hexyl ring; while allowing for R¹⁰ to be attached to R⁹ as a methyl group in a 5-position on the hexyl ring; when R⁶ and R⁷ are methyl groups on the 3 position on the hexyl ring; and when R¹ (which can be an alkyl radical containing from 1-4 carbon atoms and can include a double bond) comprises 2 carbons in a chain with the last carbon containing attached to 3 hydrogens; then 3,3,5-Trimethylcyclohexy propionate is envisioned. This chemical is added to enhance fragrances (*Page 39 Example 13*) such that the 3,3,5-Trimethylcyclohexy propionate is present in a perfume

oil with 3.75 percent of the total fragrance composition being 3,3,5-Trimethylcyclohexy ester.

Rohde et al. (Page 4 Lines 10-31 and Page 5 Lines 1-25) does not impose the requirement that the ester be configured either as cis or trans, "S" or "R", nor require any mixture combination or chemical variation. Thus, it would be obvious to use any configuration of 3,3,5-Trimethylcyclohexylesters to mix with other fragrance materials as taught by *Rohde et al.* Therefore, Claims 1-3, 5-6, and 10 are rejected.

The *Rohde et al.* genus (Page 4 Lines 10-31 and Page 5 Lines 1-25) also refers to chemicals in Claims 19-23. When R¹ is a radical with 3 carbon atoms containing a double bond, *Rohde et al.* (Page 32, Table 3) identifies 3,3,5-Trimethylcyclohexyl crotonate of the Applicants' Claim 22; this also applies to 3,3,5-Trimethylcyclohexyl butyrate of the Applicants' Claim 20 (without a double bond). When R¹ is branched and contains a double bond, 3,3,5-Trimethylcyclohexyl-3-methyl-2-butenate (of Claim 23) and 3,3,5-Trimethylcyclohexyl tiginate (of Claim 21) are envisioned since *Rohde et al.*'s genus imposes no restriction on branching. Thus, the chemical 3,3,5-Trimethylcyclohexyl 3-methyl-2-butenate of the instant Claim 23 is also envisioned.

Since *Rohde et al.*'s genus (Page 4 Lines 10-31 and Page 5 Lines 1-25) does not require restrictions on R or S configurations, the structure for the general formula of Claim 19 is obviously in the genus.

In these cases, it is obvious that *Rohde et al.*'s genus (Page 4 Lines 10-31 and Page 5 Lines 1-25), without requiring cis, trans, R, or S variations, while allowing for a double bond, includes the chemicals of Claims 19-23. Therefore, they are rejected.

Claims 1-3, 5-6, 10 and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Burrell et al.* (US 5306707).

The 3,3,5-Trimethylcyclohexylesters fall within a genus of preserving fragrances taught by *Burrell et al.* (US 5306707 Column 3 Lines 57-66). The preserving effect, these fragrances provide, allows one with ordinary skill in the art to use chemicals in this genus to provide fresher odors in fragrance compositions.

In these teachings, *Burrell et al.* (Col 3 Lines 57-66) states that Chemicals of the composition $R_1-(O)_n-(C=O)-R_2$ (where R_1 denotes a saturated or unsaturated aliphatic group, n is 0 or 1, R_2 denotes a hydrogen atom or an alkyl group of up to 5 carbon atoms and wherein R_1 and R_2 together have no more than 14 carbon atoms) function as fragrances with preservative ability and without restricting the chemicals to be either cis or trans esters (or L or R configured) and a method to use from 0.1 to 50% of at least one of the genus chemicals in a perfumed composition (*Burrell et al.* US 5306707 Claims 7 and 1). *Burrell et al.*'s genus (Col 3 Lines 57-66) places no restrictions on double bonds being excluded as part of the genus and specifically indicates use of a specific, "effective chemical" example, containing a double bond (cis-3-hexenyl acetate), in Examples 1-5 (Col 6 Lines 31-63).

Because *Burrell et al.* suggest motivations that apply to pertinent perfuming arts using chemicals in the genus they teach, Claims 1-3, 5-6,10 are rejected.

The *Burrell et al.* genus (US 5306707 Column 3 Lines 57-66) also refers to chemicals in Claims 19-23. For example, when n is 1; when 9 carbons of the substituted 3,3,5-cyclohexyl ring represent R_1 and when 4 carbon atoms represent a

branched group with a double bond for R_2 , then cis 3,3,5-Trimethylcyclohexyl-3-methyl-2-butenate, of the Applicants' Claim 23, is envisioned.

When R_2 is a carbon radical with 3 carbon atoms comprising a double bond, and the 3,3,5-Trimethylcyclohexyl group represents R_1 , then 3,3,5-Trimethylcyclohexyl crotonate of the Applicants' Claim 22 is envisioned; this also applies to 3,3,5-Trimethylcyclohexyl butyrate of the Applicants' Claim 20 (without a double bond).

When R_2 is branched and contains 4 carbon atoms as well as a double bond, and R_1 represents the 3,3,5-Trimethylcyclohexyl group; 3,3,5-Trimethylcyclohexyl-3-methyl-2-butenate (of Claim 23) and 3,3,5-Trimethylcyclohexyl tiginate (of Claim 21) are envisioned since *Burrell et al.*'s genus (*Column 3 Lines 57-66*) imposes no restriction on branching—only that R_2 contains no more than 5 carbon atoms while $R_1 + R_2 = 14$ or less.

Burrell et al.'s genus (*Col 3 Lines 57-66*) includes chemicals claimed in the Applicants' genus for Compound (I) for instant Claim 19. [For example, when n is 1; when 9 carbons of the substituted 3,3,5-cyclohexyl ring represent R_1 and when 3 carbon atoms represent a linear group without a double bond for R_2 , then cis 3,3,5-Trimethylcyclohexyl-propionate the Applicants' Claim 3, is envisioned.]

Therefore Claims 19-23 are rejected as being obviously within the genus taught by *Burrell et al.* (*Column 3 Lines 57-66*).

Claims 4, 7-9, 11-14, 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rohde et al.* (WO 01/43784) as applied to Claims 1-3, 5-6, and 10 above, and in and further view *Burrell et al.* (US 5306707).

Although *Rohde et al.* provides motivation to use 3,3,5-Trimethylcyclohexylesters, the reference is silent on whether the 3,3,5-Trimethylcyclohexylesters provide “fresher and/or fruitier” enhancements to fragrances regarding the Applicants’ instant Claims 1-4, 7-9, 11-14, 17-18.

Claims 4, 7-9, 11-14, 17-18 are rejected because it would be obvious, to one of ordinary skill in the art, to combine the teachings of *Rohde et al.* that use the 3,3,5-Trimethylcyclohexyl esters with perfumes, and use the chemicals taught by *Burrell et al.*’s perfume genus as, or with at least one of, the perfuming chemicals to prohibit fragrance degradation (while enabling a greater intensity because of the lack of degradation), and therefore enhance a composition fragrance by enabling the composition to be fresher than one that did not have a chemical from *Burrell et al.*’s genus.

Claims 1-3, 9, 11-16, 17-18 are rejected under 35 U.S.C. 103(a) as obvious over *Morelli et al.* (US 6087322).

Morelli et al. (Col 6 Lines 42-67 and Col 7 see Figure 1 below) teach the use of pro-accords that create, and therefore intensify, the fragrance odor of the chemical that is released after hydrolysis. These pro-accords release chemicals that are specified in a genus that, for example, includes the compound 3,3,5-Trimethylcyclohexyl butyrate, referred to in Claim 15. The genus of the chemicals produced covers a limited range of

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possibilities that includes 3,3,5-Trimethylcyclohexyl butyrate when R is a C₃ group that is covered by the linear C₁-C₈ alkyl group condition (Col 6 Line 48) and when R¹ is chosen as a 3,3,5 Trimethylcyclohexyl group (Col 7 Line 55).

The genus also defined by considerations for with the linear or branched C₆-C₂₀ alkenyl group conditions (Col 6 Lines 49-50). There are no limitations for the genus of *Morelli et al. (ibid.)* regarding to requirements for either cis or trans (or R or S) variations; nor are there limitations on the specific combination of ingredients.

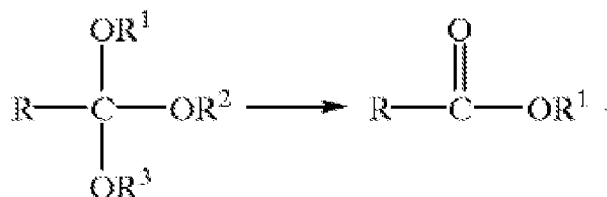


Figure 1. Hydrolysis mechanism to form a fragrance odor. (R² and R³ alcohols, also produced, are not required for this discussion).

In this case for Claim 15, the chemical fragrance would obviously be inherent to the chemical and is therefore identical to those of the fragrance stated for Claim 15. Other chemicals listed in Claims 9, 11-14, are indicated as selected mixture components, which are added to or used for process of making perfumed products, also fall into the genus by *Morelli et al.* Chemicals for each of these claims are also within *Morelli et al.*'s genus.

Since *Morelli et al.* do not require either cis or trans (nor R or S) variations for the chemical that is increased in amount due to the process in Figure 1, it would be

therefore be obvious to use any variation, including that which produces the 3,3,5-Trimethylcyclohexyl esters (in any amount), of Claims 1-3, 9, 11-15.

Claim 16-18 are rejected because the genus taught by *Morelli et al.* (Col 6 Lines 42-67 and Col 7) also includes a chemical homolog of the Applicant's chemical 3,3,5-Trimethylcyclohexyl taglinate of instant Claim 16, 3,3,5-Trimethylcyclohexyl-crotenate of Claim 17, and 3,3,5-Trimethylcyclohexyl-3-methyl-2-butenonate of instant Claim 18.

The homologs of chemicals in the genus taught by *Morelli et al.* (Col 6 Line 45 to Col 7 Line 3) are 3,3,5-Trimethylcyclohexyl 2-methylhex-2-enoate (or 3,3,5-Trimethylcyclohexyl 2-ethylidenepentenoate) for Claim 16, 3,3,5-Trimethylcyclohexyl 2-methyl hept-2-enoate, and 3,3,5-Trimethylcyclohexyl 3-ethylpent-2-enoate for Claim 18. The homologs for Claims 16 and 18 are envisioned when R is a C₆ group that complies with the C₆-C₂₀ branched alkenyl group condition (Col 6 Line 50) and when R¹ is a 3,3,5-trimethylcyclohexyl group (Col 7 Line 55) without requiring either cis or trans configurations. The homolog for Claim 17 applies when R is a C₆ group that complies with the C₆-C₂₀ linear alkenyl group condition (Col 6 Line 50) and when R¹ is a 3,3,5-Trimethylcyclohexyl group (Col 7 Line 55) when either cis or trans configurations are not required. [The Applicants' chemical 3,3,5-Trimethylcyclohexyl taglinate, in Claim 16 (or 3,3,5-Trimethylcyclohexyl-3-methyl-2-butenonate in Claim 18) has a double bond with 4 carbons in a branched moiety representing the R position—instead of 6 carbons in a branched moiety containing at least one double bond, as indicated by the reference's genus. The linear alkenyl group for the chemical in Claim 17 contains 4 carbons.]

In these cases, since the 3,3,5-Trimethylcyclohexyl 2-methylhex-2-enoate (or 3,3,5-Trimethylcyclohexyl 2-ethylidenepentanoate), in the *Morelli et al.* genus, is a homolog of the chemical fragrance imparted in instant Claim 16 (and Claim 18); and a homolog for Claim 17 is simply refers to a crotonate group with 2 additional methyl groups; then in accord with MPEP 2144.09 [which states: “Compounds which are position isomers (compounds having the same radicals in physically different positions on the same nucleus or homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by -CH₂- groups) are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties”]; it is therefore prima-facie obvious that the chemicals in claim 16-18 are the same as ones residing in the genus taught by *Morelli et al.* and also provide the same properties—including fragrance--as defined in the Applicants’ instant Claims 16-18.

Since the *Morelli et al.* teaches the use of the same chemical that can be created to increase the intensity of the fragrance chemical formed; since that chemical is prima-facie obvious to be equivalent to one taught by *Morelli et al.*; since it would be obvious to use either cis or trans variations of such a chemical; and since doing so would only involve simple substitution of one known, equivalent element for another to yield predictable results; Claim 16-18 are rejected.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to AARON GRESO whose telephone number is (571)270-7337. The examiner can normally be reached on M-F 0730-1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
Supervisory Patent Examiner
Art Unit 4131

AJG